

# **Crusader ... It's Not Your Dad's Combat Vehicle**

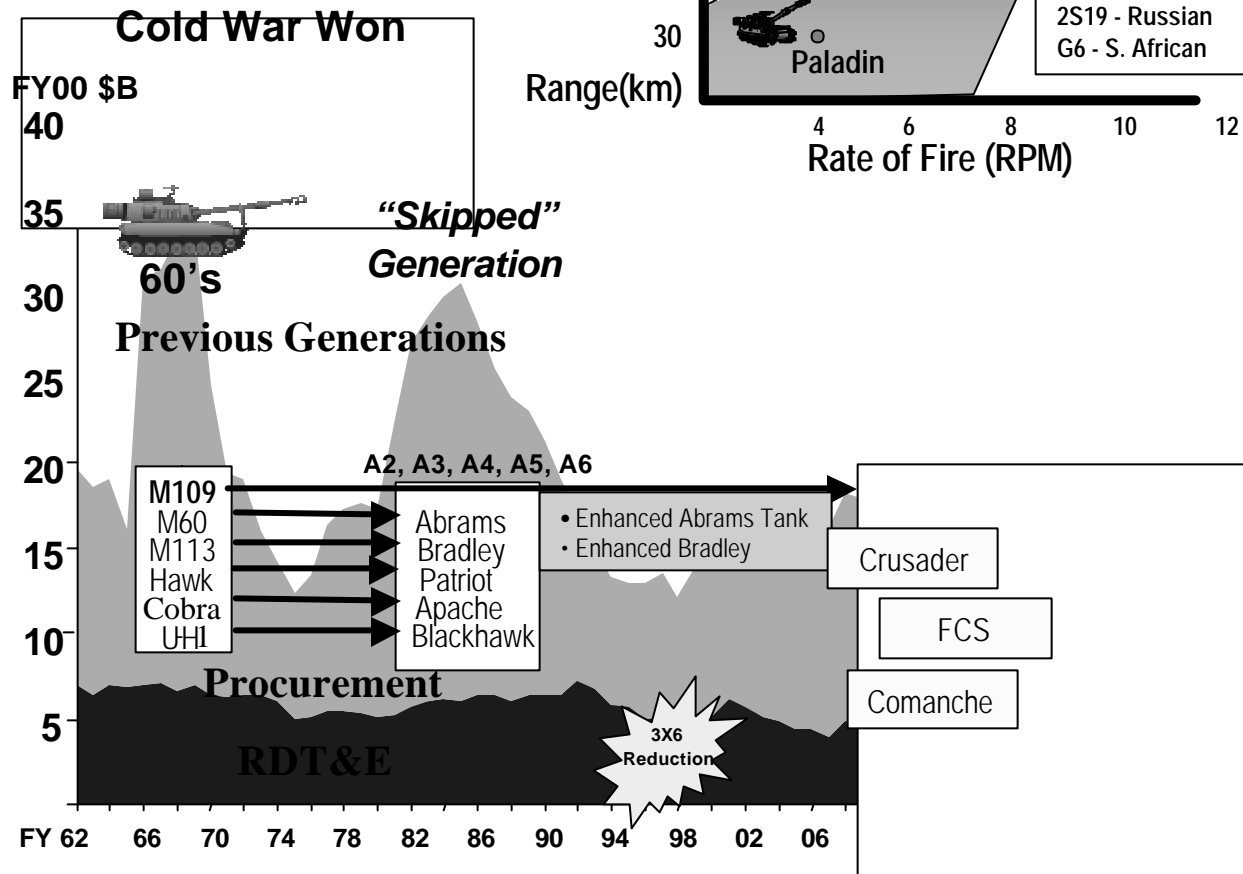
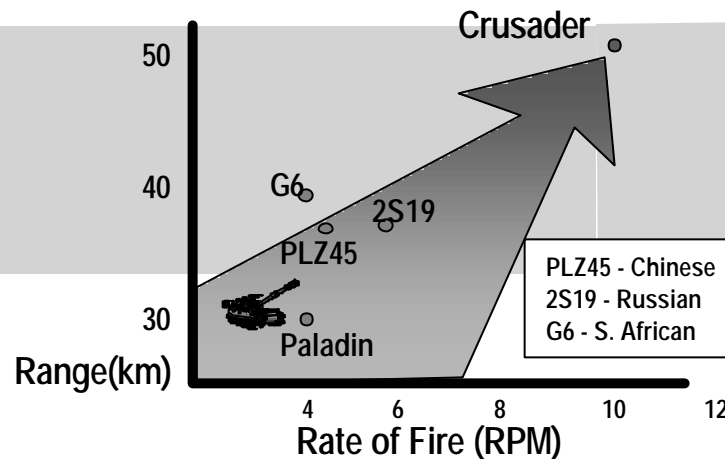
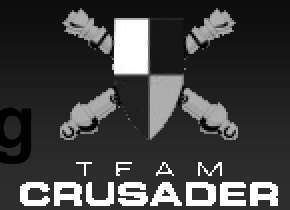
**NDIA Firepower Symposium**

**June 2001**

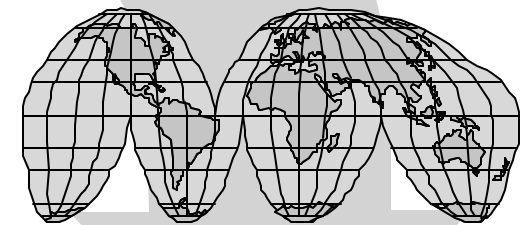
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<b>Classification of Abstract</b> unclassified	<b>Limitation of Abstract</b> UU	
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# World Changed ... Army Transforming



## Technology & World Changing

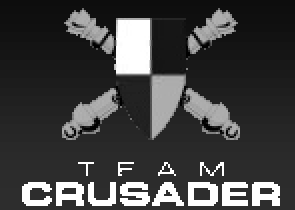


- ❖ Revolution in Military Affairs
- ❖ Regional Instability
- ❖ Threat Sophistication

# Army Transformation



# Transformation In Design



Oct 12, 1999



60 Ton Howitzer

Suspension System



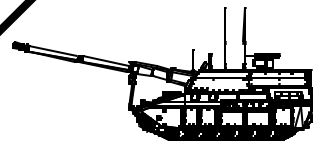
Mobility  
(7.0 Tons)



LV100-5

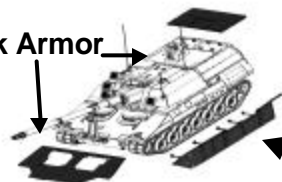
Abrams-Crusader  
Common Engine

2000



Structure &  
Materials  
(9.1 Tons)

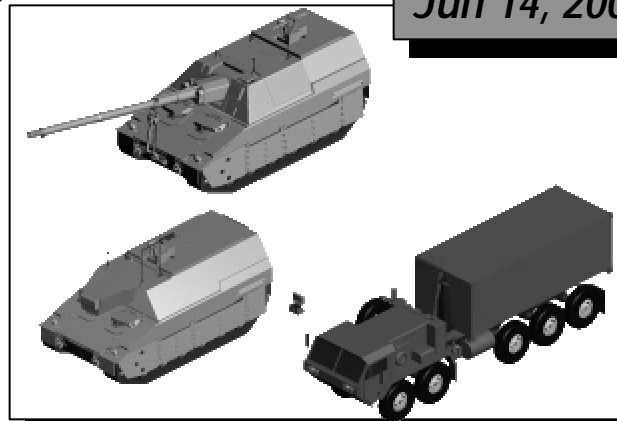
Top Attack Armor



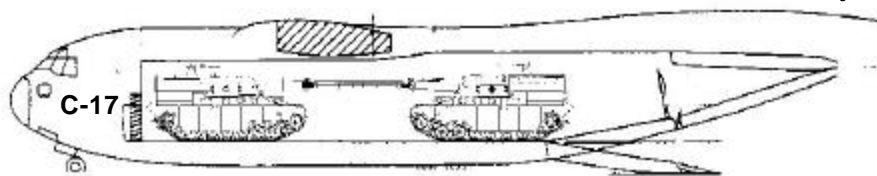
Skirts

Protection by Kits  
(3.9 Tons)

Jun 14, 2001



40 Ton Howitzer

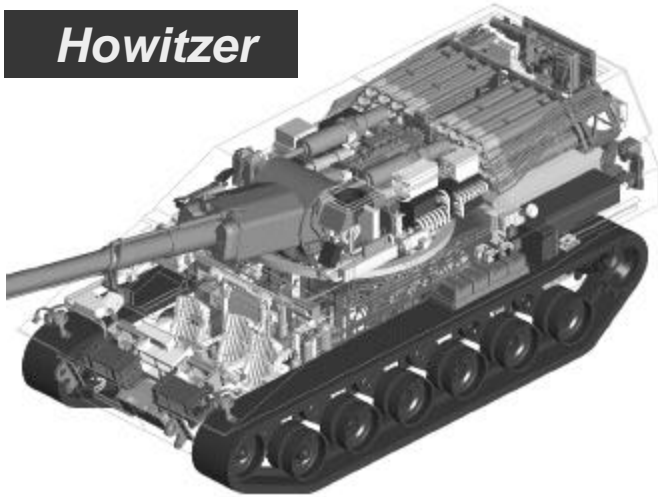


Doubled Strategic Mobility



# Requirements Provide . . .

## *Howitzer*

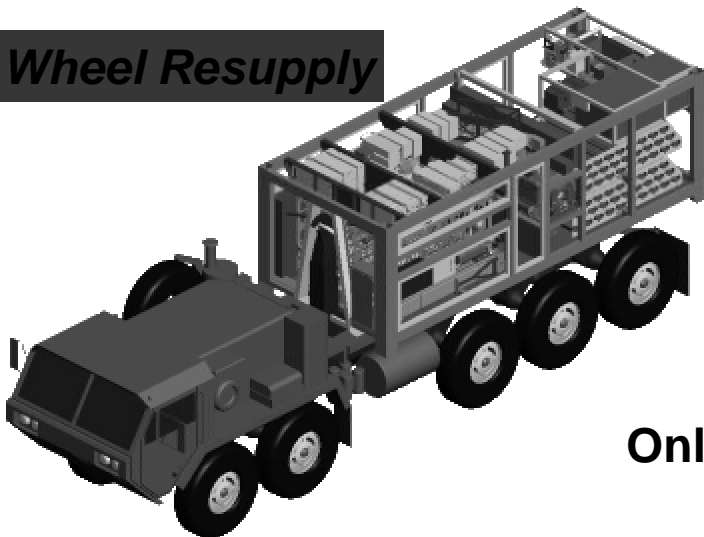


**Unprecedented Attack System**

**State of the Art Cockpit**

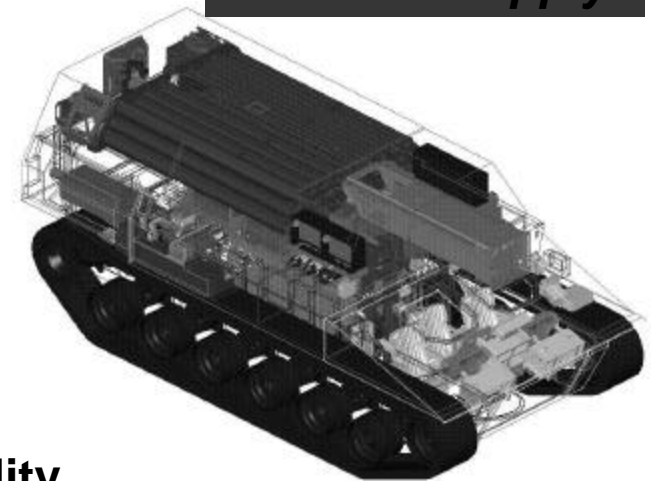
**Unmatched Soldier/System Survivability**

## *Wheel Resupply*



**Unparalleled Mobility**

## *Track Resupply*



**Only Robotic Firing & Resupply Systems in the World**

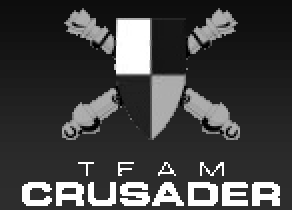
## Why Crusader?

# **Crusader - Paladin Rate Of Fire Comparison**

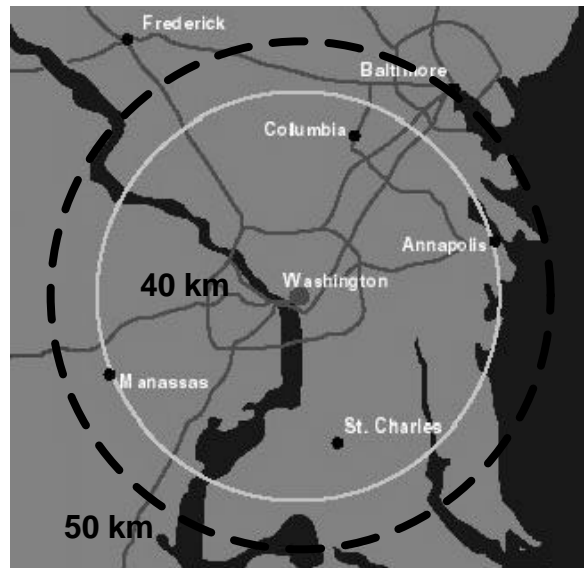




# Point Man for Change



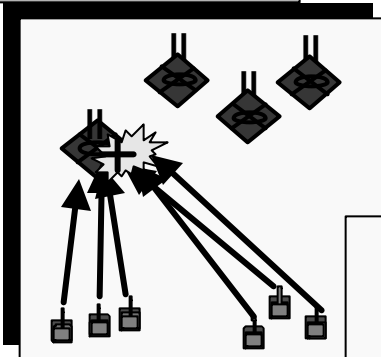
**A Crusader Kills 48  
Targets in 4 min Over  
7850 Sq Km ...**



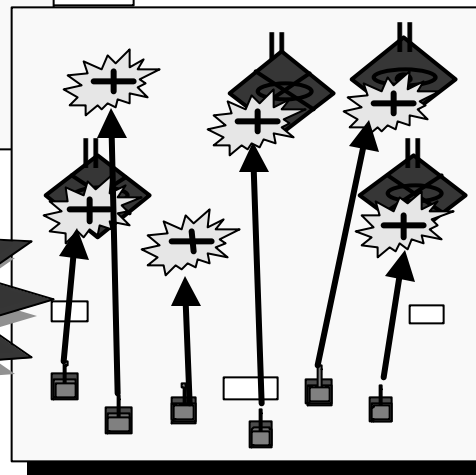
## **Crusader Firing Excalibur**

- Precision Strike .. 50+ KM
- 178% + Area Coverage
- Redskins to Ravens Reach

## **Current FA Employment**



**Multi-Target Engagements**



**18 Guns, 216 Targets, 1 Minute**

**Sensor To  
Shooter**

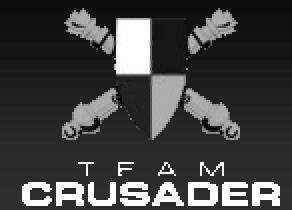


**One Minute from  
Request to Effects**





# Force Augmentation



*Albania 1999*

## TF HAWK ARTILLERY PACKAGE (A/4-27 FA)

- 6 Paladins
- 94 Soldiers
- 12 C-17 Sorties (8 C-5 Sorties)

## CRUSADER ARTILLERY PACKAGE

- 2 Crusaders
- 31 Soldiers
- 6 C-17 Sorties (4 C-5 Sorties)

**4 Crusaders Cover Kosovo**

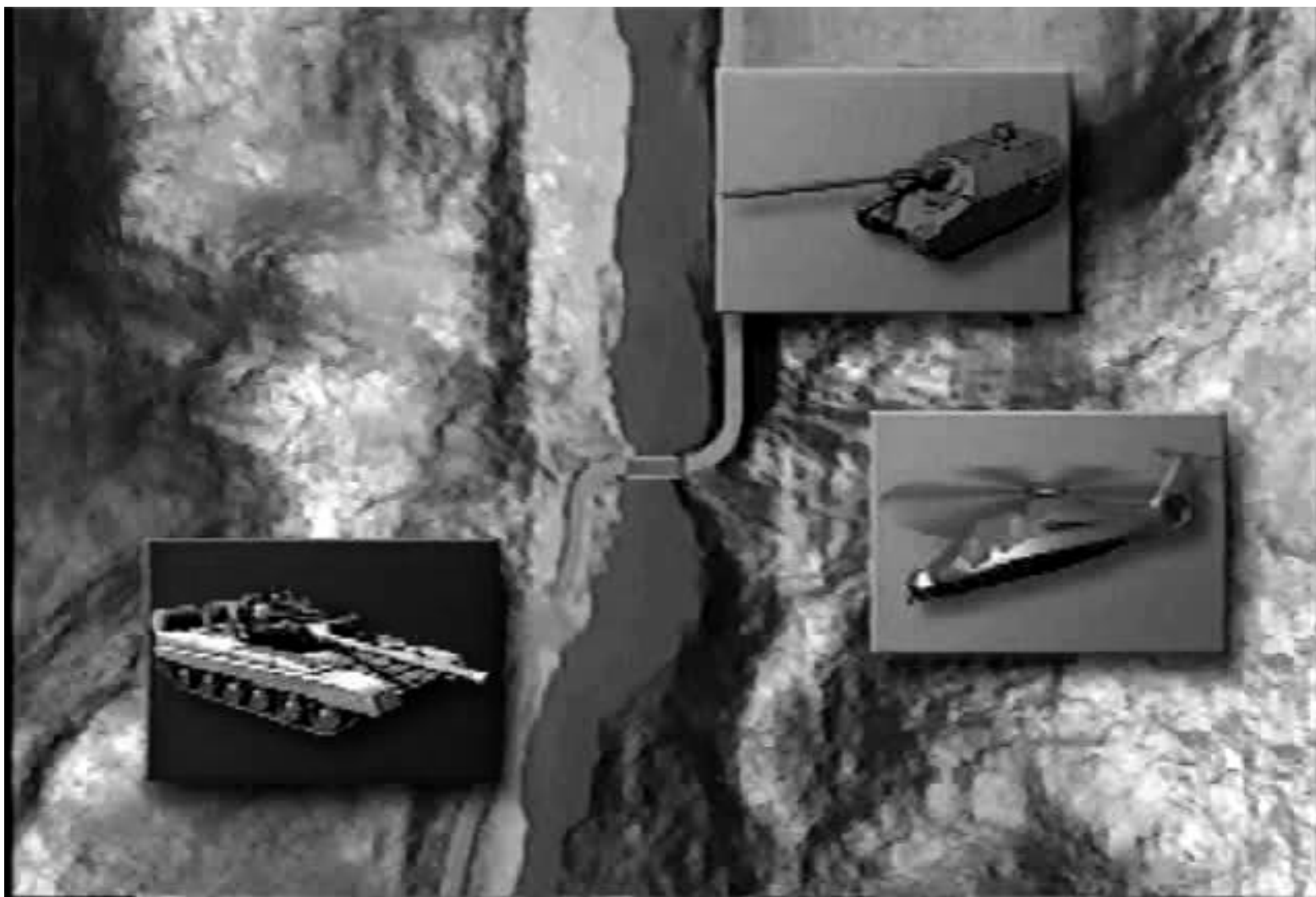
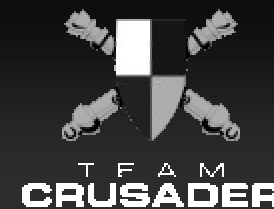


**Asymmetrical Environment**

- **50% Less Strategic Lift**
- **Smaller Logistical Tail**
- **Greater Firepower**



# Fire Mission Sequence (1)

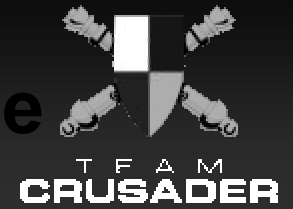


# Resupply Sequence





# First Installment of the Objective Force



Major Theater Of War

Small Scale Contingencies

Strategic Hedge for the  
World's Premiere  
Armored Corps

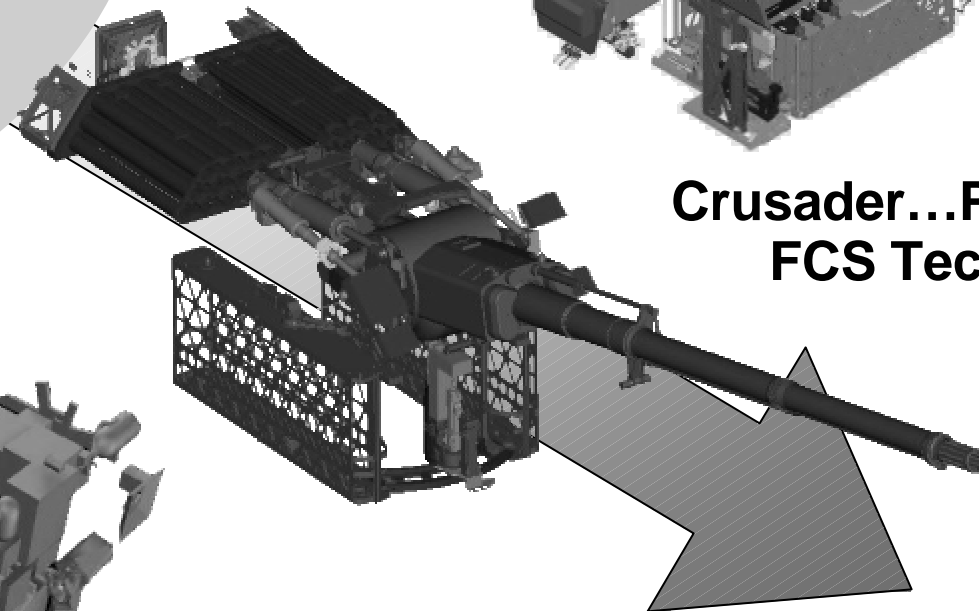
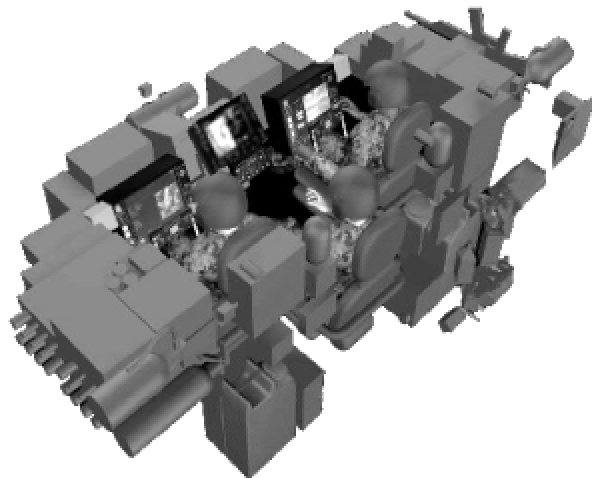
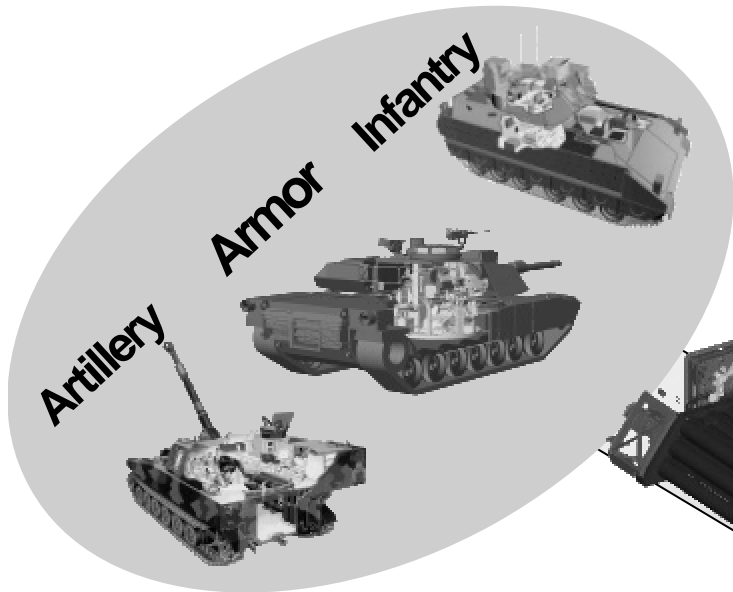
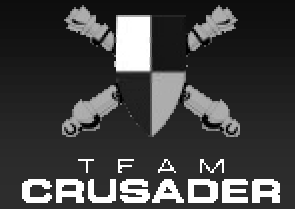
- Provides 24 Hr All Weather Fires
- Immediately Available, Never Off Station
- Fires Available in Seconds
- Supports Offensive Operations
- Provides Fires for Total Force

Firepower Augmentation  
for the Interim Force

**Leads  
Development of  
Objective Force**



# Design to Objective ...



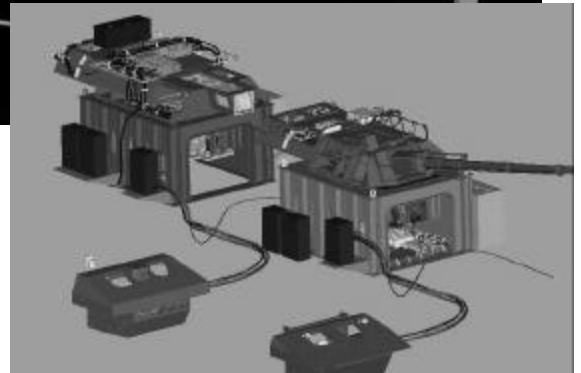
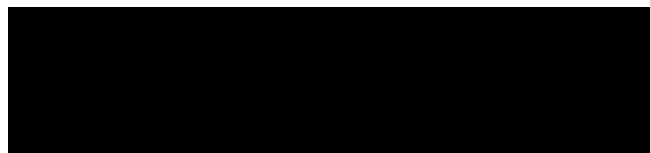
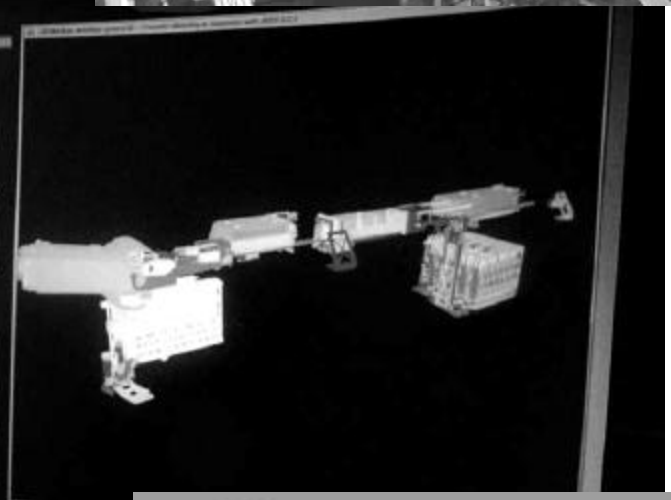
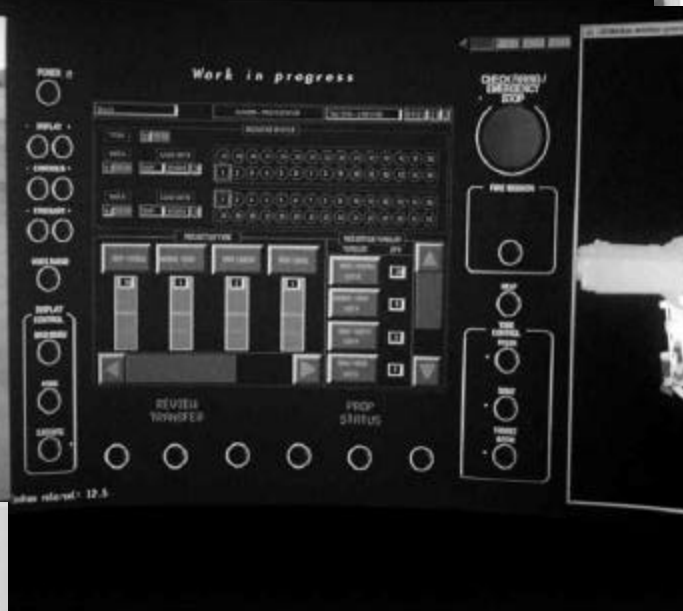
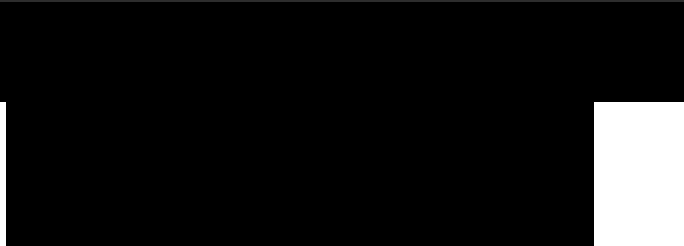
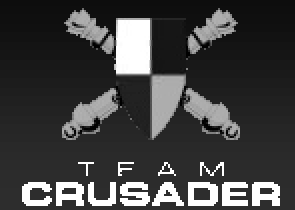
## Crusader...Pathfinder for FCS Technology

- ❖ Lethality
- ❖ Electrical
- ❖ Robotics
- ❖ Cockpit
- ❖ Mobility
- ❖ C4ISR
- ❖ Resupply
- ❖ Survivability



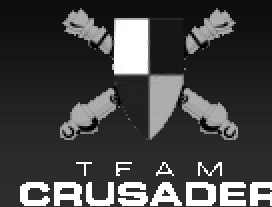


# Beyond Boeing 777 Development Era ...

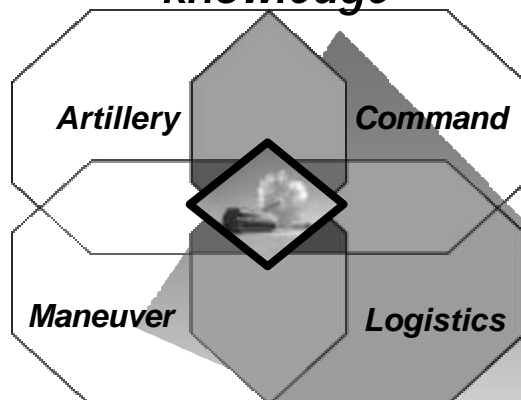




# Crusader Leads Technology Integration

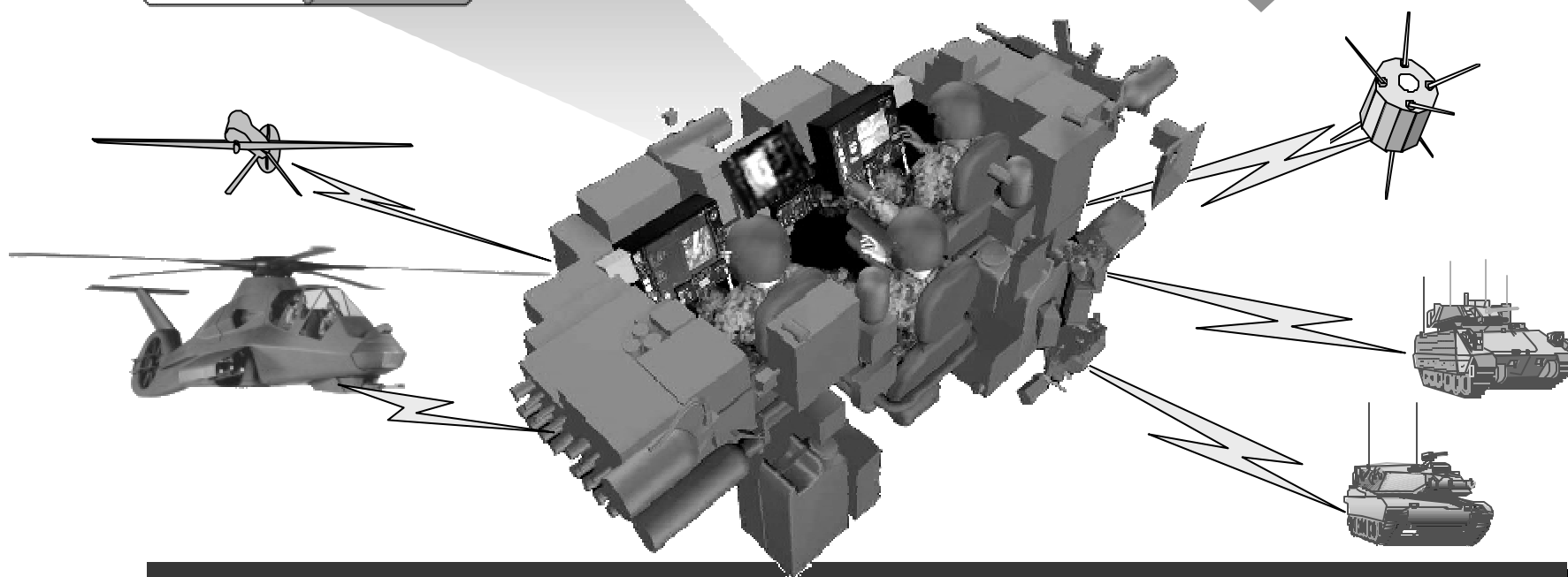


## Integration of combat knowledge



## System of Systems Development

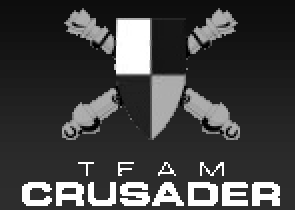
- ❖ Tactical Decision Process
- ❖ Leader Development
- ❖ Soldier - Machine Interface
- ❖ Intellectual Capital



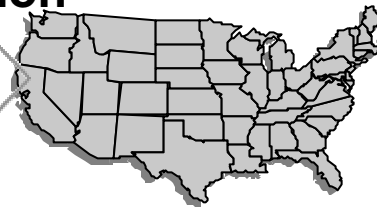
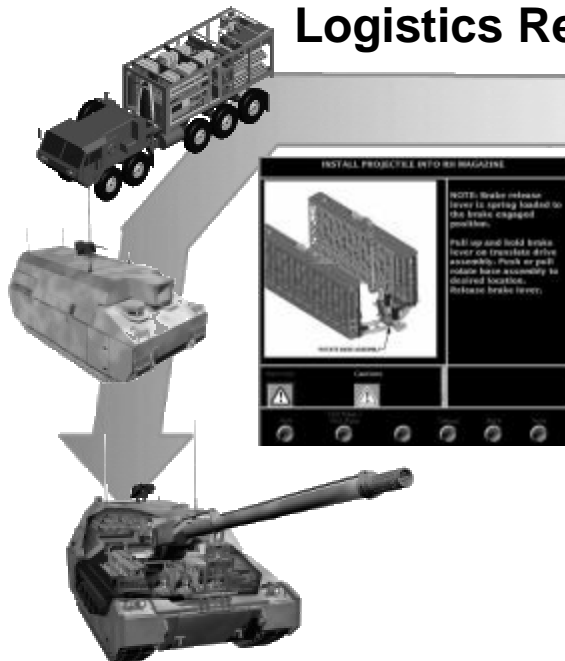
**Enables Army-Industry Team's Transition to FCS!**



# Enabling Technologies for FCS

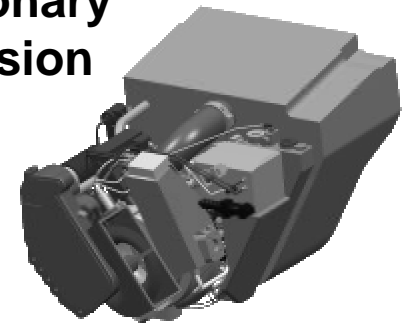


## Logistics Revolution

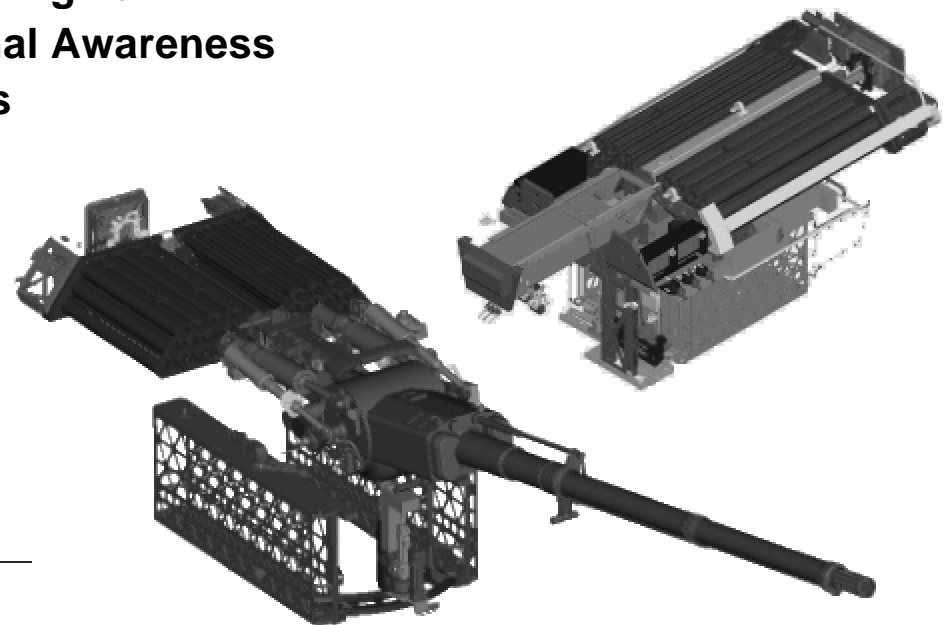
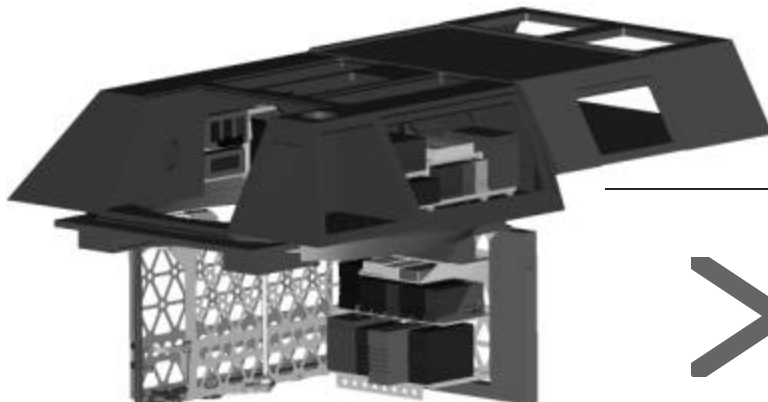


- ❖ Interactive Electronic Technical Manual (IETM)
- ❖ Robotic Fault Mgmt
- ❖ Log Situational Awareness
- ❖ Decision Aids

## Evolutionary Propulsion



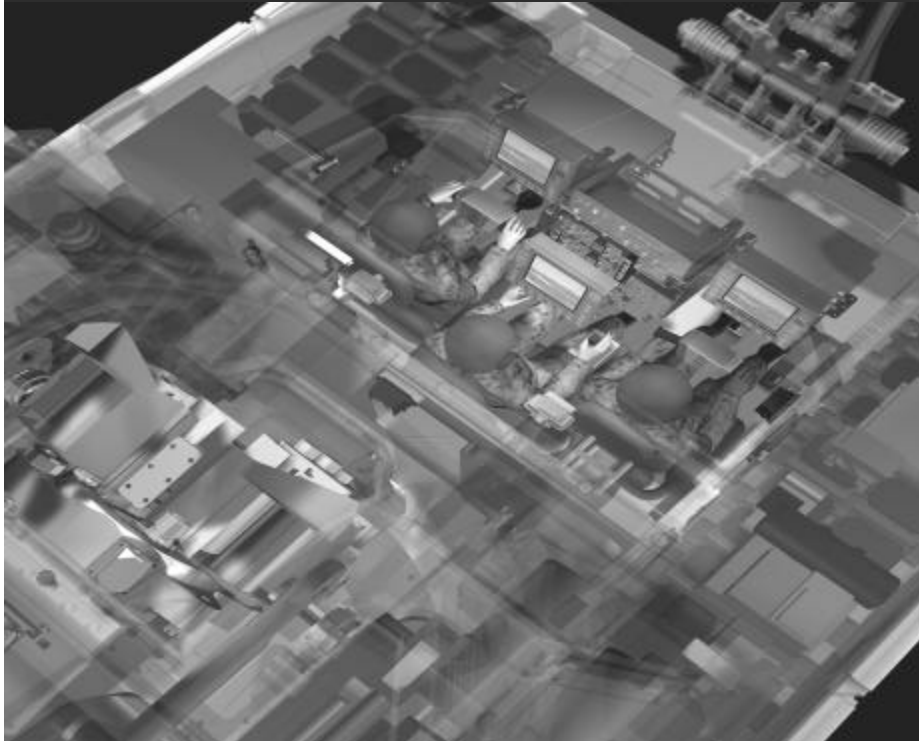
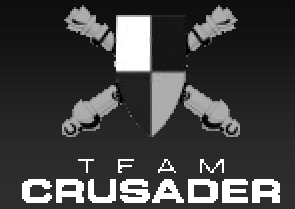
## Advanced Materials & Production



## Robotic Firing and Resupply



## In Summary . . .



- Unique Design . . . Breaks Paradigm
- Technology Carrier . . . Design to Objective
- Transformation . . . Strategic Mobility
- Gain Overmatch . . . Tactical Agility
- Force Protection . . . Responsive Firepower
- Warfighting System . . . Keeps Soldiers Alive
- Program . . . On Cost, Schedule, Performance

**With Crusader, the Army's Force Wins  
Decisively ....**

**First Installment of the Objective Force**